

SPECIFICATION AMENDMENTS

Please replace the paragraph at page 6, lines 13-28 with the following:

In one embodiment of the invention, the method of increasing isoflavonoid biosynthesis, down-regulating flavanone 3-hydroxylase comprises introducing a selected DNA into said plant comprising an antisense nucleotide comprising from about 20 or more nucleotides complementary to a gene encoding flavanone 3-hydroxylase. In certain embodiments of the invention, the antisense oligonucleotide comprises from about 20 to about 1242 nucleotides complementary to the nucleic acid sequence of ~~SEQ ID NO:7~~ (SEQ ID NO:10), from about 20 to about 815 nucleotides complementary to the nucleic acid sequence of ~~SEQ ID NO:10~~ (SEQ ID NO:13) or from about 20 to about 5586 nucleotides complementary to nucleotides 82850-88437 of ~~SEQ ID NO:8~~ (SEQ ID NO:15). In still further embodiments, the antisense oligonucleotide is further defined as comprising from about 20 to about 780 nucleotides complementary to nucleotides 82850-83062, 83159-83406, 86908-87232, and/or 87801-88437 of ~~SEQ ID NO:8~~ (SEQ ID NO:15), or is further defined as comprising from about 20 to about 1021 nucleotides complementary to nucleotides 82850-83062, 83159-83406, 86908-87232, and/or 87801-88043 of ~~SEQ ID NO:8~~ (SEQ ID NO:15). The antisense oligonucleotide may be introduced by any method, including genetically transforming said plant or a parent plant of any previous generation of said plant with said selected DNA.

Please replace the paragraph at page 7, lines 7-18 with the following:

In another aspect, the invention provides a transgenic plant stably transformed with: a) a first selected DNA comprising a nucleic acid encoding an antisense oligonucleotide operably linked to a promoter functional in said plant, wherein said antisense oligonucleotide comprises from about 20 to about 1242 nucleotides complementary to the nucleic acid sequence of ~~SEQ ID NO:7~~ (SEQ ID NO:10), from about 20 to about 815 nucleotides complementary to the nucleic acid sequence of ~~SEQ ID NO:10~~ (SEQ ID NO:13) or from about 20 to about 5586 nucleotides complementary to nucleotides 82850-88437 of ~~SEQ ID NO:8~~ (SEQ ID NO:15); and b) a second selected DNA comprising an isoflavone biosynthesis-coding sequence operably linked to a promoter functional in said plant, wherein the coding sequence encodes a polypeptide selected from the group consisting of: the polypeptide of SEQ ID NO:2, the polypeptide encoded by SEQ

ID NO:3, the polypeptide encoded by SEQ ID NO:5 and the polypeptide encoded by SEQ ID NO:6.

Please replace the paragraph at page 8, lines 1-6 with the following:

In certain embodiments of the invention, the transgenic plant of claim 21, wherein the antisense oligonucleotide is further defined as comprising from about 20 to about 780 nucleotides complementary to nucleotides 82850-83062, 83159-83406, 86908-87232, and/or 87801-88437 of ~~SEQ ID NO:8 (SEQ ID NO:15)~~. The antisense oligonucleotide may also be further defined as comprising from about 20 to about 1021 nucleotides complementary to nucleotides 82850-83062, 83159-83406, 86908-87232, and/or 87801-88043 of ~~SEQ ID NO:8 (SEQ ID NO:15)~~.

Please replace the paragraph at page 14, lines 15-29 and continued at page 15, lines 1-4 with the following:

Certain embodiments of the current invention concern plant transformation constructs. For example, one aspect of the current invention is a plant transformation vector comprising one or more flavonoid and/or isoflavonoid biosynthesis gene. Exemplary coding sequences for use with the invention include chalcone isomerase (SEQ ID NO:3 and SEQ ID NO:4); chalcone synthase (SEQ ID NO:5 and SEQ ID NO:6) and isoflavone synthase (SEQ ID NO:1). In certain embodiments, antisense flavanone 3-hydroxylase sequences are employed with the invention. Exemplary flavanone 3-hydroxylase nucleic acids include at least 20, 40, 80, 120, 300 and up to the full length of the nucleic acid sequences of ~~SEQ ID NO:7 (SEQ ID NO:10)~~ (*Arabidopsis thaliana*; Genbank Accession No. AJ295587.1), ~~SEQ ID NO:8 (SEQ ID NO:15)~~ (rice; Genbank Accession No. AC092697; gene: 82850-88437; mRNA: 82850-83062, 83159-83406, 86908-87232, and 87801-88437; coding sequence: 82850-83062, 83159-83406, 86908-87232, and 87801-88043) and ~~SEQ ID NO:10 (SEQ ID NO:13)~~ (*Juglans nigra*; Genbank Accession No. AJ278457) may be used. Examples of certain such sequences, each of which may be used, for example, as antisense oligonucleotides, include the nucleic acid sequences of nucleotides 82850-82870, 82850-82890, 82850-82950, 82850-83062, 83159-83179, 83159-83259, 86908-86928, 86908-87008, 86908-87202, 87801-87821, 87801-87901 and/or 87801-88001 of ~~SEQ ID NO:8~~

(SEQ ID NO:15). Other exemplary sequences include the sequences of nucleotides 1-20, 1-40, 1-100, 100-300, 1-300, 1-500, 1-800 and 1-1242 of ~~SEQ ID NO:7~~ (SEQ ID NO:10), as well as 1-20, 1-40, 1-100, 100-1300, 1-800 and 1-815 of ~~SEQ ID NO:10~~ (SEQ ID NO:13).